

Claims:

1. A touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer, including at least a display screen and a shell; wherein an induction layer is provided in the rear of the display screen, the output of the induction layer is connected to an induction control circuit, a display screen control circuit is also provided in the shell, characterized by: the said induction layer may be the antenna array printed on the insulation membrane and arranged along the X, Y axes, therein the area enclosed by each lattice unit constitutes one induction cell.

2. The touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to the claim 1, characterized by: the area of said induction layer is same as those of the display screen, or smaller than those of the display screen, that is, the induction layer is provided coincidently or partly in the rear of the display screen.

3. The touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 2, characterized by: the said induction layer whose area is smaller than those of the display screen is positioned at side or center of the display scope of the display screen.

4. The touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 1, characterized by: a shield layer is provided after the induction layer in order to enhance the anti-interference ability of the device.

5. The touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 1, characterized by: a buffering layer is also provided between the induction layer and the shield layer.

6. The touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 4 or 5, characterized by: a space is provided between the induction layer and the shield layer.

7. The touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 1, 2, 3, 4 or 5, characterized by: said induction layer may be the antenna array formed by etching the copper-platinum covering the insulation membrane.

8. The touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 7, characterized by: said induction layer is an antenna array formed by flexible printed circuitry (FPC).

9. The touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 1, 2, 3,

4 or 5, characterized by: said induction layer is an antenna array formed by the silver-plasm or the mixture material of the silver-plasm and the carbon-plasm which is printed on the insulation membrane.

10. The touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 9, characterized by: the said induction layer can be printed on two surfaces of the insulation membrane, or printed on one surface of the insulation membrane, and there are two layers of insulation membrane in which one is overlaid on the other.

11. The touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 9, characterized by: the said insulation membrane is made by film material.

12. The touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 1, 2, 3, 4 or 5, characterized by: said induction layer consists of two or more layers, and the induction cells on respective induction layers are set to interlace each other.

13. The touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 12, characterized by: the interval sizes of the said induction cells on respective layers may be same or different.

14. The touch control display screen with built-in membrane antenna

array lattice electromagnetic induction layer according to claim 1, 2, 3, 4 or 5, characterized by: the said induction control circuit and the induction layer are integrated by direct connection, the components of the induction control circuit are positioned on the output terminal of the antenna array, and the induction control circuit is positioned in the shell.

15. The touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 1, 2, 3, 4 or 5, characterized by: the said components of the induction control circuit are mounted on a printed substrate which is separated from the induction layer, the output of the antenna array of the induction layer is connected to the corresponding input terminal on the printed substrate by means of pressure-connection, plug-in connection or welding-connection.

16. The touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 15, characterized by: the said output of the antenna array of the induction layer is positioned between a hard sheet and a printed substrate; a buffering layer is provided between the hard sheet and the output of the antenna array; the hard sheet, the buffering layer and the output of the antenna array are overlaid on the printed substrate by means of the screwing-conjunction; the output of the antenna array is connected with

corresponding input terminal.

17. The touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 15, characterized by: the said printed substrate is the printed substrate of the display screen control circuit in the body of the display screen.

18. The touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 15, characterized by: the said printed substrate is the printed substrate of the display screen control circuit outside the body of the display screen, or a self contained unit, otherwise it is set on the main board of PC; the connection between them is achieved by line or cable.

19. The touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 18, characterized by: the said induction control circuit is positioned outside the body, and connected to the body through the electrical connection means; the output of the antenna array of the induction layer is connected with the output interface of the induction layer by means of pressure connection, plug-in connection, or welding-connection; an interface which can match the electrical connection means of the induction layer is provided on the control circuit.

20. The touch screen with built-in wire lattice electromagnetic induction layer according to claim 19, characterized by: the said output

interface of the induction layer and the interface of the control circuit is one of the following: pin-type connection means, flexible printed circuitry means, PIN-PIN connection means, welding spot (VGA) thermal-melted connection means, ultrasonic welding device, solder-plate welding device, puncture-type connection means.

21. The touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 1, 2, 3, 4 or 5, characterized by: a protecting layer is provided in the front of the said display screen.

22. The touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 1, 2, 3, 4 or 5, characterized by: the said display screen is a plasma display screen or a liquid-crystal display screen.